

117TH CONGRESS  
1ST SESSION

# H. R. 4985

To implement certain recommendations of the National Security Commission  
on Artificial Intelligence.

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## IN THE HOUSE OF REPRESENTATIVES

AUGUST 6, 2021

Mr. VELA introduced the following bill; which was referred to the Committee on Armed Services, and in addition to the Committees on Intelligence (Permanent Select), Foreign Affairs, Transportation and Infrastructure, and Oversight and Reform, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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# A BILL

To implement certain recommendations of the National  
Security Commission on Artificial Intelligence.

1       *Be it enacted by the Senate and House of Representa-*

2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

4       (a) SHORT TITLE.—This Act may be cited as the

5       “Digital Defense Leadership Act”.

6       (b) TABLE OF CONTENTS.—The table of contents for

7       this Act is as follows:

Sec. 1. Short title; table of contents.

Sec. 2. National strategy relating to the global information domain.

Sec. 3. Artificial intelligence readiness goals.

Sec. 4. Role of intelligence community in steering committee on emerging technology.

Sec. 5. Resourcing plan for digital ecosystem.

Sec. 6. Integrating digital skill sets and computational thinking into military junior leader education.

Sec. 7. Integration of material on emerging technologies into professional military education.

Sec. 8. Short course on emerging technologies for senior personnel of the Department of Defense.

Sec. 9. Emerging technology-coded billets within the Department of Defense.

Sec. 10. Agile contracting mechanism for software acquisition.

Sec. 11. Enhanced role of Under Secretary of Defense for Research and Engineering on the Joint Requirements Oversight Council.

Sec. 12. Artificial Intelligence Development and Prototyping Fund.

Sec. 13. Enhanced authority to enter into cooperative research and development agreements with international partners.

Sec. 14. Role of Director of Science and Technology as Chief Technology Officer for the intelligence community.

Sec. 15. Establishment of Artificial Intelligence Critical Applications Fund.

Sec. 16. Artificial intelligence technology roadmap and funding plan for the intelligence community.

Sec. 17. Digital expertise recruiting offices.

Sec. 18. Occupational series relating to artificial intelligence and digital career fields.

Sec. 19. Military career fields for software development, data science, and artificial intelligence.

**1 SEC. 2. NATIONAL STRATEGY RELATING TO THE GLOBAL  
2 INFORMATION DOMAIN.**

3       (a) IN GENERAL.—Not later than 270 days after the  
4 date of the enactment of this section, the President shall  
5 transmit to Congress a national strategy relating to the  
6 global information domain to—

7           (1) address such domain as a component of the  
8 national security of the United States; and  
9           (2) ensure the United States leads in the devel-  
10 opment of technologies and tactics applicable to such  
11 domain.

12       (b) ELEMENTS.—The strategy required under sub-  
13 section (a) shall, at a minimum—

1                   (1) prioritize the global information domain as  
2                   an area for international competition with respect to  
3                   foreign adversaries;

15 (A) changing the priorities of the national  
16 security agencies of the United States; and

19                         (5) provide recommendations, including any  
20                         suggestions for legislation, with respect to updat-  
21                         ing—

22 (A) critical infrastructure designations;

23 and

(B) sector-specific plans to account for emerging technologies, including artificial intelligence.

4 (c) DEFINITIONS.—In this section:

(2) ARTIFICIAL INTELLIGENCE-ENABLED MALIGN INFORMATION.—The term “artificial intelligence-enabled malign information” refers to a broad range of applications in which artificial intelligence is used to generate, spread, or target disinformation, or otherwise control or manipulate the flow and substance of information in the global information domain.

1       United States or security and safety of United  
2       States persons.

3                     (5) GLOBAL INFORMATION DOMAIN.—The term  
4       “global information domain” means a sphere of stra-  
5       tegic competition in which foreign adversaries and  
6       nonstate actors create, obtain, fuse, analyze, distort,  
7       transfer, exchange, or disseminate information,  
8       overtly or covertly, to influence public opinion for  
9       national security, geopolitical, or economic purposes.

10 **SEC. 3. ARTIFICIAL INTELLIGENCE READINESS GOALS.**

11                     (a) IN GENERAL.—Not later than one year after the  
12       date of the enactment of this Act, the Secretary of Defense  
13       shall—

14                         (1) review the potential applications of artificial  
15       intelligence and digital technology to the platforms,  
16       processes, and operations of the Department of De-  
17       fense; and

18                         (2) establish performance objectives and accom-  
19       panying metrics for the incorporation of artificial in-  
20       telligence and digital readiness into such platforms,  
21       processes, and operations.

22                     (b) SKILLS GAPS.—As a part of the review required  
23       by subsection (a), the Secretary shall direct the military  
24       departments and other relevant organizations and ele-  
25       ments of the Department of Defense to—

1                   (1) conduct a comprehensive review of skill  
2       gaps in the fields of software development, software  
3       engineering, knowledge management, data science,  
4       and artificial intelligence;

5                   (2) assess the number and qualifications of ci-  
6       vilian personnel needed for both management and  
7       specialist tracks in such fields;

8                   (3) assess the number of military personnel (in-  
9       cluding officers and enlisted members of the Armed  
10      Forces) needed for both management and specialist  
11      tracks in such fields; and

12                  (4) establish recruiting, training, and talent  
13       management goals to achieve and maintain the staff-  
14       ing levels needed to fill identified gaps and meet the  
15       Department's needs for skilled personnel.

16                  (c) REPORT TO CONGRESS.—Not later than 120 days  
17       after the completion of the review required by subsection  
18       (a), the Secretary of Defense shall submit to Congress a  
19       report on the findings of the review and any actions taken  
20       or proposed to be taken by the Secretary to address such  
21       findings.

1   **SEC. 4. ROLE OF INTELLIGENCE COMMUNITY IN STEERING**

2                   **COMMITTEE ON EMERGING TECHNOLOGY.**

3       Section 236 of the William M. (Mac) Thornberry Na-  
4 tional Defense Authorization Act for Fiscal Year 2021  
5 (Public Law 116–283), is amended—

6                   (1) in subsection (b)—

7                   (A) by redesignating paragraph (8) as  
8                   paragraph (9); and

9                   (B) by inserting after paragraph (7) the  
10                  following new paragraph:

11                  “(8) One or more representatives of the intel-  
12 ligence community (as defined in section 3 of the  
13 National Security Act of 1947 (50 U.S.C. 3003)),  
14 which shall include, at a minimum, the Principal  
15 Deputy Director of National Intelligence.”;

16                  (2) by redesignating subsection (c) as sub-  
17                  section (d); and

18                  (3) by inserting after subsection (b) the fol-  
19                  lowing new subsection:

20                  “(c) CHAIRPERSONS.—The Deputy Secretary of De-  
21 fense, the Vice Chairman of the Joint Chiefs of Staff, and  
22 the Principal Deputy Director of National Intelligence  
23 shall serve as Co-Chairpersons of the Steering Com-  
24 mittee.”.

## 1 SEC. 5. RESOURCING PLAN FOR DIGITAL ECOSYSTEM.

2       (a) IN GENERAL.—Not later than one year after the  
3 date of the enactment of this Act, the Secretary of Defense  
4 shall develop a plan for the development of a modern dig-  
5 ital ecosystem that uses state-of-the-art tools and modern  
6 processes to enable the development, testing, fielding, and  
7 continuous updating of artificial intelligence-powered ap-  
8 plications at speed and scale from headquarters to the tac-  
9 tical edge.

10 (b) CONTENTS OF PLAN.—At a minimum, the plan  
11 required by subsection (a) shall include—

**SEC. 6. INTEGRATING DIGITAL SKILL SETS AND COMPUTATIONAL THINKING INTO MILITARY JUNIOR LEADER EDUCATION.**

25 (a) IN GENERAL.—Not later than 270 days after the  
26 date of the enactment of this Act, the Chiefs of the Armed

1 Forces shall expand the curriculum for military junior  
2 leader education to include the following:

- 3                     (1) Problem definition and curation.
- 4                     (2) A conceptual understanding of the artificial  
5                     intelligence lifecycle.
- 6                     (3) Data collection and management.
- 7                     (4) Probabilistic reasoning and data visualiza-  
8                     tion.
- 9                     (5) Data-informed decision making.

10                 (b) RESOURCES.—In carrying out subsection (a), the  
11 Chiefs shall use existing artificial intelligence-enabled sys-  
12 tems and tools to the extent possible.

13 **SEC. 7. INTEGRATION OF MATERIAL ON EMERGING TECH-**  
14                     **NOLOGIES INTO PROFESSIONAL MILITARY**  
15                     **EDUCATION.**

16                 Not later than one year after the date of the enact-  
17 ment of this Act, the Secretary of Defense, in consultation  
18 with the Joint Chiefs of Staff, shall ensure that the cur-  
19 riculum for professional military education for each Armed  
20 Force under the jurisdiction of the Secretary of a military  
21 department includes periodic courses on militarily signifi-  
22 cant emerging technologies that expand the knowledge  
23 base, vocabulary, and skills necessary to intelligently ana-  
24 lyze and use emerging technologies in the tactical, oper-

1 ational, and strategic levels of warfighting and warfighting  
2 support.

3 **SEC. 8. SHORT COURSE ON EMERGING TECHNOLOGIES FOR**  
4 **SENIOR PERSONNEL OF THE DEPARTMENT**  
5 **OF DEFENSE.**

6 (a) ESTABLISHMENT.—Not later than one year after  
7 the date of the enactment of this Act, the Secretary of  
8 Defense shall establish a short course on emerging tech-  
9 nologies for covered personnel. The short course shall be  
10 taught on an iterative, two-year cycle and shall address  
11 how the most recent and relevant technologies may be ap-  
12 plied to military and business outcomes in the Department  
13 of Defense.

14 (b) OBJECTIVES.—In assessing participation in the  
15 short course under subsection (a), the Secretary shall en-  
16 sure that—

17 (1) in the first year that the course is offered,  
18 at least 20 percent of covered personnel pass the  
19 short course; and

20 (2) in each subsequent year, an additional 10  
21 percent of covered personnel pass the such course,  
22 until 80 percent of covered personnel have passed.

23 (c) COVERED PERSONNEL DEFINED.—In this sec-  
24 tion, the term “covered personnel” means—

25 (1) officers in—

4 (B) a grade above O-6; and

(2) civilian employees of the Department of Defense in the Senior Executive Service.

**7 SEC. 9. EMERGING TECHNOLOGY-CODED BILLETS WITHIN**

**8 THE DEPARTMENT OF DEFENSE.**

9       (a) IN GENERAL.—Not later than one year after the  
10 date of the enactment of this Act, the Secretary of Defense  
11 shall ensure that each Armed Force under the jurisdiction  
12 of the Secretary of a military department—

13                   (1) develop a process to qualify officers on  
14 emerging technology; and

17 (b) QUALIFICATION PROCESS.—The process under  
18 subsection (a)(1) shall be modeled on a streamlined  
19 version of the joint qualification process and may include  
20 credit for serving in the following:

21 (1) Fellowships focused on emerging technology.  
22

23 (2) Talent exchanges focused on emerging tech-  
24 nology

(3) Federal occupations focused on emerging technology.

(4) Educational courses focused on emerging technologies.

(c) APPROPRIATE BILLETS.—Billets under sub-section (a)(2) may include the following duties:

7 (1) Acquisition of emerging technologies.

8 (2) Integrating technology into field units.

9 (3) Developing organizational and operational

10 concepts.

11 (4) Developing training and educational plans.

## 12 (5) Operational and tactical leadership.

## **13 SEC. 10. AGILE CONTRACTING MECHANISM FOR SOFTWARE 14 ACQUISITION.**

15       (a) IN GENERAL.—Not later than 270 days after the  
16 date of the enactment of this Act, the Secretary of Defense  
17 shall establish an agile contracting mechanism to support  
18 any software acquisition pathway developed pursuant to  
19 section 800 of the National Defense Authorization Act for  
20 Fiscal Year 2020 (10 U.S.C. 2223a note).

21 (b) CHARACTERISTICS.—The agile contracting mech-  
22 anism established pursuant to subsection (a) shall author-  
23 ize processes pursuant to which—

24 (1) a contract is awarded on the basis of state-  
25 ments of qualifications and past performance data

1 submitted by offerors, supplemented by discussions  
2 with two or more offerors determined to be the most  
3 highly qualified offerors, without regard to price;

4 (2) the contract terms identify the persons to  
5 be engaged for the work, and substitutions shall not  
6 be made during the base contract period without the  
7 advance written consent of the contracting officer;

8 (3) the contractor reviews existing software in  
9 consultation with the user community and utilizes  
10 user feedback to define and prioritize software re-  
11 quirements, and to design and implement new soft-  
12 ware and software upgrades, as appropriate;

13 (4) an independent cost estimate is developed in  
14 parallel with engineering of the software; and

15 (5) performance metrics based on the value of  
16 the software to be acquired are established to ad-  
17 dress issues such as development, delivery, and de-  
18 ployment rates of software and software updates,  
19 and assessment and estimation of the size and com-  
20 plexity of the life cycle of such software.

1 SEC. 11. ENHANCED ROLE OF UNDER SECRETARY OF DE-  
2 FENSE FOR RESEARCH AND ENGINEERING  
3 ON THE JOINT REQUIREMENTS OVERSIGHT  
4 COUNCIL.

5       Section 181 of title 10, United States Code, is  
6 amended—

7 (1) in subsection (b)—

(B) by redesignating paragraphs (2) through (6) as paragraphs (3) through (7);

14 (C) by inserting after paragraph (1) the  
15 following new paragraph:

16                 “(2) leveraging awareness of global technology  
17                 trends, threats, and adversary capabilities to address  
18                 gaps in joint military capabilities and validate the  
19                 technical feasibility of requirements developed by the  
20                 armed forces;”;

25 (E) in paragraph (5), as so redesignated,  
26 by inserting "the Secretary of Defense and" be-

1 fore “the Chairman of the Joint Chiefs of  
2 Staff”;

3 (2) in subsection (c)—

4 (A) in paragraph (1)—

5 (i) in subparagraph (A), by striking  
6 “Chairman of the Joint Chiefs of Staff for  
7 making recommendations about” and in-  
8 serting “Council for”;

9 (ii) by redesignating subparagraphs  
10 (B) through (F) as subparagraphs (C)  
11 through (G), respectively; and

12 (iii) by inserting after subparagraph  
13 (A) the following new subparagraph:

14 “(B) The Under Secretary of Defense for  
15 Research and Engineering, who is the Co-Chair  
16 of the Council and is the chief science advisor  
17 to the Council.”;

18 (B) in paragraph (2), by striking “(B),  
19 (C), (D), and (E)” and inserting “(C), (D),  
20 (E), and (F)”;

21 (C) by amending paragraph (3) to read as  
22 follows:

23 “(3) In making any recommendation to the  
24 Secretary of Defense and the Chairman of the Joint  
25 Chiefs of Staff pursuant to this section, the Co-

1        Chairs of the Council shall provide any dissenting  
2        view of members of the Council with respect to such  
3        recommendation.”; and

4                 (3) in subsection (d)(1)—

5                         (A) by striking subparagraph (D); and  
6                         (B) by redesignating subparagraphs (E)  
7                         through (H) as paragraphs (D) through (G),  
8                         respectively.

9 **SEC. 12. ARTIFICIAL INTELLIGENCE DEVELOPMENT AND**  
10 **PROTOTYPING FUND.**

11        (a) IN GENERAL.—The Secretary of Defense shall es-  
12 tablish a fund to be known as the “Artificial Intelligence  
13 Development and Prototyping Fund” to support oper-  
14 ational prototyping and speed the transition of artificial  
15 intelligence-enabled applications into both service-specific  
16 and joint mission capabilities, with priority given to joint  
17 mission capabilities for combatant commanders. The Fund  
18 shall be managed by the Under Secretary of Defense for  
19 Research and Engineering, in consultation with the Direc-  
20 tor of the Joint Artificial Intelligence Center, the head of  
21 the Joint Staff, and the Chief of each Armed Force.

22        (b) TRANSFER AUTHORITY.—Amounts available in  
23 the Fund may be transferred to the Secretary of a military  
24 department for the purpose of carrying out a development  
25 or prototyping program selected by the Under Secretary

- 1 of Defense for Research and Engineering for the purposes
- 2 described in subsection (a). Any amount so transferred
- 3 shall be credited to the account to which it is transferred.
- 4 The transfer authority provided in this subsection is in
- 5 addition to any other transfer authority available to the
- 6 Department of Defense.

7 (c) NOTICE TO CONGRESS.—The Under Secretary of  
8 Defense for Research and Development shall notify the  
9 congressional defense committees (as defined in section  
10 101(a)(16) of title 10, United States Code) of all transfers  
11 under subsection (b). Each notification shall specify the  
12 amount transferred, the purpose of the transfer, and the  
13 total projected cost and estimated cost to complete the ac-  
14 quisition program to which the funds were transferred.

15 SEC. 13. ENHANCED AUTHORITY TO ENTER INTO COOPERA-  
16 TIVE RESEARCH AND DEVELOPMENT AGREE-  
17 MENTS WITH INTERNATIONAL PARTNERS.

18       (a) AUTHORITY OF SECRETARY OF DEFENSE.—Section  
19      2350a of title 10, United States Code, is amended—  
20           (1) in subsection (a)—

21 (A) in paragraph (2), by adding at the end  
22 the following:

23               “(F) Any business, academic institution, re-  
24       search institution, or other nongovernmental entity  
25       organized pursuant to the laws of a country referred

1 to in subparagraphs (C), (D), and (E), subject to  
2 the consent of the country involved.”;

3 (B) in paragraph (3), by striking “a coun-  
4 try referred to in subparagraph (E) of para-  
5 graph (2),” and inserting “a country referred to  
6 in subparagraph (E) of paragraph (2) or a non-  
7 governmental entity referred to in subpara-  
8 graph (F) of such paragraph,”; and

9 (C) by adding at the end the following:

10 “(4) The Secretary may delegate the authority to  
11 enter memoranda of understanding pursuant to this sec-  
12 tion to the secretary of a military department, the Direc-  
13 tor of the Joint Artificial Intelligence Center, and the Di-  
14 rector of the Defense Advanced Research Projects Agency,  
15 subject to such terms and conditions as may be necessary  
16 to ensure that any agreements entered are consistent with  
17 the foreign policy and defense policy of the United  
18 States.”;

19 (2) in subsection (b)(1), by striking “will im-  
20 prove, through the application of emerging tech-  
21 nology,” and inserting “is likely to improve, through  
22 the application or enhancement of emerging tech-  
23 nology,”; and

24 (3) in subsection (c)(3), by inserting at the end  
25 the following: “If a foreign partner is expected to

1 contribute significantly to the development of a new  
2 or novel capability, full consideration shall be given  
3 to nonmonetary contributions, including the value of  
4 research and development capabilities and the stra-  
5 tegic partnerships.”.

6 (b) AUTHORITY OF THE PRESIDENT.—Section 2767  
7 of title 22, United States Code, is amended—

8       (1) in subsection (c), by adding at the end the  
9 following: “If a foreign partner is expected to con-  
10 tribute significantly to the development of a new or  
11 novel capability, full consideration shall be given to  
12 non-monetary contributions, including the value of  
13 research and development capabilities and the stra-  
14 tegic partnerships.”;

15       (2) in subsection (f)(4), by inserting “(and a  
16 description of any nonmonetary contributions made  
17 by such participants)” before the semicolon; and

18       (3) in subsection (j)—

19           (A) by amending the subsection heading to  
20 read as follows: “COOPERATIVE PROJECT  
21 AGREEMENTS WITH FRIENDLY FOREIGN  
22 COUNTRIES NOT MEMBERS OF NATO AND  
23 WITH NONGOVERNMENTAL ORGANIZATIONS IN  
24 NATO AND IN FRIENDLY NON-NATO COUN-  
25 TRIES”; and

(B) by amending paragraph (2) to read as follows:

3               “(2) The President may enter into a coopera-  
4       tive project agreement with any business, academic  
5       institution, research institution, or other nongovern-  
6       mental entity organized pursuant to the laws of a  
7       NATO member or a friendly foreign country that is  
8       not a member of NATO, subject to the consent of  
9       the country involved.”.

10 SEC. 14. ROLE OF DIRECTOR OF SCIENCE AND TECH-  
11 NOLOGY AS CHIEF TECHNOLOGY OFFICER  
12 FOR THE INTELLIGENCE COMMUNITY.

13       Section 103E(c) of the National Security Act of 1947  
14 (50 U.S.C. 3030(c)) is amended—

15                   (1) by redesignating paragraphs (2) through  
16                   (5) as paragraphs (5) through (8), respectively; and  
17                   (2) by inserting after paragraph (1) the fol-  
18                   lowing new paragraphs:

19               “(2) serve as the Chief Technology Officer for  
20               the intelligence community;

21               “(3) establish policies for the intelligence com-  
22               munity on research and engineering, technology de-  
23               velopment, technology transition, prototyping activi-  
24               ties, experimentation, and developmental testing,  
25               and oversee the implementation of such policies;

1               “(4) establish common technical standards and  
2 policies necessary to rapidly scale artificial intel-  
3 ligence-enabled applications across the intelligence  
4 community;”.

**5 SEC. 15. ESTABLISHMENT OF ARTIFICIAL INTELLIGENCE  
6 CRITICAL APPLICATIONS FUND.**

7       (a) ESTABLISHMENT.—The Director of National In-  
8 telligence shall establish in the Treasury a fund, to be  
9 known as the “Artificial Intelligence Critical Applications  
10 Fund”, for the purposes of supporting the development  
11 and acquisition of applications enabled by artificial intel-  
12 ligence for use by the intelligence community.

13       (b) MANAGEMENT.—The Director of Science and  
14 Technology appointed under section 103E of the National  
15 Security Act of 1947 (50 U.S.C. 3030), in consultation  
16 with the Director of National Intelligence Science and  
17 Technology Committee specified in such section, shall be  
18 responsible for the management of the Artificial Intel-  
19 ligence Critical Applications Fund.

**20 (c) AUTHORITY TO TRANSFER AMOUNTS.—**

1       under the account to which transferred, for the pur-  
2       pose of carrying out a program selected by the Di-  
3       rector of Science and Technology for the purposes  
4       described in subsection (a). Any amount so trans-  
5       ferred shall be credited to the account to which it  
6       was transferred.

7                     (2) ADDITIONAL TRANSFER AUTHORITY.—The  
8       transfer authority in paragraph (1) is in addition to  
9       any other transfer authority provided to the Director  
10      of National Intelligence or the head of any element  
11      of the intelligence community.

12                   (d) CONGRESSIONAL NOTIFICATION.—Upon making  
13      a transfer pursuant to subsection (c), the Director of Na-  
14      tional Intelligence shall submit to the appropriate congres-  
15      sional committees a notification of the transfer. Each noti-  
16      fication shall include an identification of the following:

- 17                   (1) The amount transferred.  
18                   (2) The purpose of the transfer.

19                   (3) The total projected cost and estimated cost  
20      to complete the program for which the transferred  
21      amounts will be used.

22                   (e) DEFINITIONS.—In this section:

23                   (1) The term “appropriate congressional com-  
24      mittees” means—

1                             (A) the congressional intelligence commit-  
2                             tees; and

3                             (B) the Committees on Appropriations of  
4                             the House of Representatives and the Senate.

5                             (2) The term “artificial intelligence” has the  
6                             meaning given such term in section 238 of the John  
7                             S. McCain National Defense Authorization Act for  
8                             Fiscal Year 2019 (10 U.S.C. 2358 note).

9                             (3) The terms “congressional intelligence com-  
10                             mittees” and “intelligence community” have the  
11                             meaning given those term in section 3 of the Na-  
12                             tional Security Act of 1947 (50 U.S.C. 3003).

13 **SEC. 16. ARTIFICIAL INTELLIGENCE TECHNOLOGY ROAD-**  
14                             **MAP AND FUNDING PLAN FOR THE INTEL-**  
15                             **LIGENCE COMMUNITY.**

16                             (a) IN GENERAL.—Not later than 180 days after the  
17                             date of the enactment of this Act, the Director of National  
18                             Intelligence, in consultation with the Secretary of Defense,  
19                             shall develop a technology annex to the National Intel-  
20                             ligence Strategy and a 10-year plan to provide long-term,  
21                             predictable funding of up to \$1,000,000,000 to implement  
22                             the steps identified in such annex.

23                             (b) CONTENTS OF TECHNOLOGY ANNEX.—The tech-  
24                             nology annex under subsection (a) shall provide a tech-  
25                             nology roadmap for the adoption of artificial intelligence-

1 enabled applications to solve operational intelligence re-  
2 quirements, including—

3                 (1) a description of challenges faced in the ef-  
4 forts of the intelligence community to analyze the  
5 global environment and monitor technological ad-  
6 vancements, adversarial capability development, and  
7 emerging threats;

8                 (2) identification of technical capabilities, in-  
9 cluding artificial intelligence capabilities, needed to  
10 enable steps to address each challenge;

11                 (3) a prioritized, time-phased plan for devel-  
12 oping or acquiring such technical capabilities, that  
13 takes into account research and development  
14 timelines, a strategy for public private partnerships,  
15 and a strategy for connecting researchers to end  
16 users for early prototyping, experimentation, and  
17 iteration;

18                 (4) any additional or revised acquisition policies  
19 and workforce training requirements that may be  
20 needed to enable personnel of the intelligence com-  
21 munity to identify, procure, integrate, and operate  
22 the technologies identified in the annex;

23                 (5) identification of infrastructure requirements  
24 for developing and deploying technical capabilities,  
25 including—

- 1                             (A) data, compute, storage, and network  
2                             needs;  
3                             (B) a resourced and prioritized plan for es-  
4                             tablishing such infrastructure; and  
5                             (C) an analysis of the testing, evaluation,  
6                             verification, and validation requirements to sup-  
7                             port prototyping and experimentation and a  
8                             resourced plan to implement them, including  
9                             standards, testbeds, and red-teams for testing  
10                            artificial intelligence systems against digital  
11                            “denial and deception” attacks;
- 12                           (6) consideration of human factor elements as-  
13                             sociated with priority technical capabilities, including  
14                             innovative human-centric approaches to user inter-  
15                             face, human-machine teaming, and workflow integra-  
16                             tion;
- 17                           (7) consideration of interoperability with allies  
18                             and partners of the United States, including areas  
19                             for sharing of data, tools, and intelligence products;  
20                             and
- 21                           (8) flexibility to adapt and iterate annex imple-  
22                             mentation at the speed of technological advance-  
23                             ment.

24                           (c) INTELLIGENCE COMMUNITY DEFINED.—In this  
25                             section, the term “intelligence community” has the mean-

1 ing given that term in section 3 of the National Security  
2 Act of 1947 (50 U.S.C. 3003).

3 **SEC. 17. DIGITAL EXPERTISE RECRUITING OFFICES.**

4 (a) DIGITAL EXPERTISE RECRUITING FOR THE DE-  
5 PARTMENT OF DEFENSE.—

6 (1) ESTABLISHMENT.—Not later than 270 days  
7 after the date of the enactment of this Act, the Sec-  
8 retary of Defense shall designate a chief digital re-  
9 cruiting officer within the office of the Under Sec-  
10 retary of Defense for Personnel and Readiness to  
11 oversee a digital recruiting office to carry out the re-  
12 sponsibilities set forth in paragraph (2).

13 (2) DUTIES.—The chief digital recruiting offi-  
14 cer shall be responsible for—

15 (A) identifying needs within the Depart-  
16 ment of Defense for specific types of digital ex-  
17 pertise;

18 (B) recruiting technologists in partnership  
19 with the heads of elements of the Department,  
20 including by attending conferences and career  
21 fairs, and actively recruiting on university cam-  
22 puses and from the private sector;

23 (C) integrating Federal scholarship for  
24 service programs into civilian recruiting;

1                             (D) offering recruitment and referral bo-  
2                             nuses; and

3                             (E) partnering with human resource teams  
4                             in the elements of the Department to use di-  
5                             rect-hire authorities to accelerate hiring.

6                             (3) RESOURCES.—The Secretary of Defense  
7                             shall ensure that the chief digital recruiting officer  
8                             is provided with personnel and resources sufficient  
9                             to maintain an office and to carry out the duties set  
10                            forth in paragraph (2).

11                            (b) DIGITAL EXPERTISE RECRUITING FOR THE IN-  
12                            TELLIGENCE COMMUNITY.—

13                            (1) ESTABLISHMENT.—Not later than 270 days  
14                             after the date of the enactment of this Act, the Di-  
15                             rector of National Intelligence shall designate a chief  
16                             digital recruiting officer to oversee a digital recruit-  
17                             ing office to carry out the responsibilities set forth  
18                             in paragraph (2).

19                            (2) DUTIES.—The chief digital recruiting offi-  
20                             cer shall be responsible for—

21                             (A) identifying needs within the intel-  
22                             ligence community for specific types of digital  
23                             expertise;

24                             (B) recruiting technologists, in partnership  
25                             with the heads of the elements of the intel-

1           ligence community, including by attending con-  
2           ferences and career fairs, and actively recruit-  
3           ing on university campuses and from the pri-  
4           vate sector;

5                 (C) integrating Federal scholarship for  
6                 service programs into intelligence community  
7                 recruiting;

8                 (D) offering recruitment and referral bo-  
9                 nuses; and

10                 (E) partnering with human resource teams  
11                 in the elements of the intelligence community to  
12                 use direct-hire authorities to accelerate hiring.

13                 (3) RESOURCES.—The Director of National In-  
14                 telligence shall ensure that the chief digital recruit-  
15                 ing officer is provided with personnel and resources  
16                 sufficient to maintain an office and to carry out the  
17                 duties set forth in paragraph (2).

18                 (4) INTELLIGENCE COMMUNITY DEFINED.—In  
19                 this subsection, the term “intelligence community”  
20                 has the meaning given that term in section 3 of the  
21                 National Security Act of 1947 (50 U.S.C. 3003).

1   **SEC. 18. OCCUPATIONAL SERIES RELATING TO ARTIFICIAL**  
2                         **INTELLIGENCE AND DIGITAL CAREER**  
3                         **FIELDS.**

4         (a) **DIGITAL CAREER FIELDS.**—Not later than 270  
5    days after the date of the enactment of this Act, the Direc-  
6   tor of the Office of Personnel Management shall exercise  
7   the authority of the Director under section 5105 of title  
8   5, United States Code, to establish one or more new occu-  
9   pational series and associated policies covering Federal  
10   Government positions in the fields of software develop-  
11   ment, software engineering, data science, and knowledge  
12   management.

13         (b) **ARTIFICIAL INTELLIGENCE FIELDS.**—Not later  
14   than 270 days after the date of the enactment of this Act,  
15   the Director of the Office of Personnel Management shall  
16   exercise the authority of the Director under section 5105  
17   of title 5, United States Code, to establish a new occupa-  
18   tional series and associated policies covering Federal Gov-  
19   ernment positions in the field of artificial intelligence.

20   **SEC. 19. MILITARY CAREER FIELDS FOR SOFTWARE DEVEL-**  
21                         **OPMENT, DATA SCIENCE, AND ARTIFICIAL IN-**  
22                         **TELLIGENCE.**

23         Section 230 of the National Defense Authorization  
24   Act for Fiscal Year 2020 (Public Law 116–92; 10 U.S.C.  
25   501 note prec.) is amended by adding at the end the fol-  
26   lowing new subsection:

1       “(d) CAREER FIELDS.—Not later than 270 days  
2 after the date of the enactment of the Digital Defense  
3 Leadership Act, each Chief of an Armed Force shall estab-  
4 lish new military career fields—  
5           “(1) for software development, data science,  
6 and artificial intelligence for members and officers  
7 under the jurisdiction of such Chief; and  
8           “(2) that are designated competitive categories  
9 for promotion under subchapter VI of chapter 36 of  
10 title 10, United States Code.”.

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